

Beechcraft SERVICE INSTRUCTIONS

CLASS II

33, 35, 36

No. 0558-412
ATA Code 21-40
Recurring Inspection

- SUBJECT:** HEATER INSTALLATION – INSPECTION PROCEDURE FOR HEATER
- EFFECTIVITY:** BEECHCRAFT Debonair/Bonanza models 33, A33, B33, C33, E33, F33 and G33, serials CD-1 and after;
Bonanza models C33A, E33A and F33A, serials CE-1 and after;
Bonanza models E33C and F33C, serials CJ-1 and after;
Bonanza models 35, A35, B35, C35, D35, E35, F35, G35, H35, J35, K35, M35, N35, P35, S35, V35, V35TC, V35A, V35A-TC, V35B and V35B-TC, serials D-1 and after;
Bonanza 36 and A36, serials E-1 and after.
- REASON:** To insure safe operation of the heater on all model Debonair and Bonanza aircraft.
- COMPLIANCE:** The heater and related system components should be visually checked each 100 hour and/or annual inspection and pressure tested at 500 hours. As the heater becomes older it may be advisable to check it more often.
- DESCRIPTION:** The heater and tail pipe are to be removed from the aircraft and the heater checked for leaks by applying air pressure internally and a soap solution externally.
- APPROVAL:** FAA Approved - DOA CE-2.
- MANPOWER:** The following information is for planning purposes only:

Estimated man-hours: 2 1/2 hours
Suggested number of men. 1 man
- MATERIAL:** Refer to the applicable BEECHCRAFT Parts Catalog or the service publications reprinted herein for part numbers when parts replacement is necessary.
- SPECIAL TOOLS:** None.
- WEIGHT AND BALANCE:** None.
- REFERENCES:** The applicable BEECHCRAFT Parts Catalog, shop manual and attached service publications.
- PUBLICATIONS AFFECTED:** This Service Instructions No. 0558-412 incorporates and supersedes the heater inspection procedure published in Service News, Volume XI, Number 3, Page 13.

Reprinted herein for convenient reference are the following named service publications which were previously issued: Service Bulletin 66-44, Service Bulletin 67-9, Service Instructions 0096-412 and Service Instructions 0429-412.

1 of 2

The operation, care and maintenance of the airplane is the owners responsibility. As conditions warrant BEECH AIRCRAFT CORPORATION issues service instructions, recommending modifications and operational procedures to enable the owner to get the maximum utility and safety from his airplane. These instructions are available to BEECHCRAFT owners through their BEECHCRAFT Distributor or Dealer. An index of Service Instructions is issued periodically. When instructions are issued, a temporary recording of the publication should be made in the appropriate index. Warranty reimbursement will be considered on specific items so noted in the service instruction provided the airplane is within the first six month period after delivery from the Factory and meets the terms and conditions defined in the published standard BEECHCRAFT warranty. Requests for warranty consideration on items so noted must be received within the time limits noted in the service instructions.

Service Instructions No. 0558-412

**ACCOMPLISHMENT
INSTRUCTIONS:**

Inspection of the heater may be accomplished in the following manner.

1. Remove the heater and tail pipe.
2. Remove the tail pipe from the heater.

NOTE

Refer to service publications reprinted herein for special inspection and maintenance procedures which are applicable to specific series aircraft.

3. Remove the heater shroud.
4. Plug one end of the heater. Connect a source of compressed air to the other end and apply 25 psig. (This 25 psig test supersedes the 15 psig test called out in Service Bulletin 67-9.)
5. Apply a soap solution to the exterior surface of the heater and check for leaks, particularly around the heater transfer pins. If any leaks are apparent, replace the heater.

NOTE

Even though no leaks appear, heaters which are badly scaled or corroded should be replaced rather than risking a leak.

6. Thoroughly rinse off all soap solution before reinstalling the heater.

RECORD COMPLIANCE:

Upon completion of these Service Instructions make an appropriate maintenance record entry.

Beechcraft SERVICE BULLETIN

Published by the Customer Service Division

No. 66-44

SUBJECT: INSPECTING HEATER-MUFFLERS ON BEECHCRAFT BONANZAS

AIRCRAFT AFFECTED: BEECHCRAFT
Model V35, serials D-7980 through D-8040.

REASON FOR CHANGE: To prevent heater-muffler failure.

ACCOMPLISHMENT: As soon as is practical upon receiving this bulletin.

DESCRIPTION: On all BEECHCRAFT Model V35 aircraft as described above, the heater-muffler should be inspected, as follows, to make sure that there are three axial restraint rods on the heater, and that these rods are all three precisely parallel to the centerline axis of the heater.

1. Open the R. H. engine cowl and the adjacent rectangular access panel.
2. Remove both heater ducts from the heater (see figure 1).
3. Uncouple the heater from the exhaust system, and remove it from the aircraft.
4. Unscrew the heater shroud and slide it off the heater.
5. Look for axial restraint rods on the heater (see figure 2), and carefully check, using an accurate machinist's square, if these rods are perpendicular to the heater end plates (even one or two degrees of variation from the perpendicular can result in heater leaks and wear).
6. If the rods are missing, or are not precisely perpendicular to the end plates, replace the entire heater assembly with a new one, P/N 8046-1.
7. Replace the heater shroud, reinstall the heater, attach the heat ducts, and close the engine cowl and access panel.

After complying with this bulletin, enter an appropriate statement in the aircraft log book.

The following part is required for replacement rework:

PART NUMBER	DESCRIPTION	QUANTITY
8046-1	Heater assembly	1

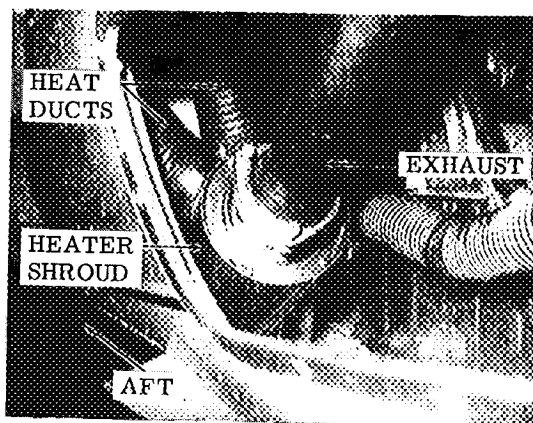


Figure 1

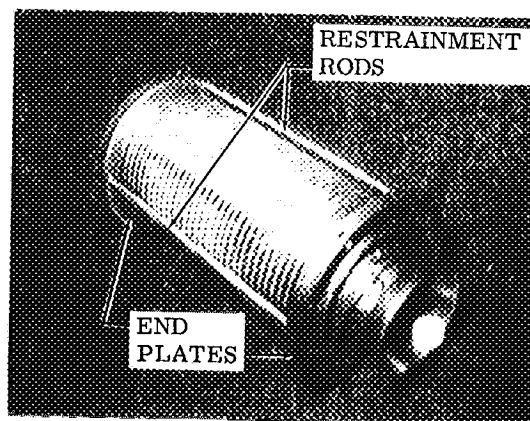


Figure 2

1066

THE OPERATION, CARE AND MAINTENANCE OF AN AIRPLANE IS THE OWNERS RESPONSIBILITY. AS CONDITIONS WARRANT, BEECH AIRCRAFT CORPORATION ISSUES SERVICE BULLETINS AND SERVICE LETTERS RECOMMENDING MODIFICATIONS AND OPERATIONAL PROCEDURES TO ENABLE THE OWNER TO GET THE MAXIMUM UTILITY AND SAFETY FROM HIS AIRPLANE.

THESE BULLETINS AND LETTERS ARE AVAILABLE TO BEECHCRAFT OWNERS THROUGH THEIR BEECHCRAFT DISTRIBUTOR OR DEALER. WHEN SERVICE BULLETINS AND LETTERS ARE ISSUED, A TEMPORARY RECORDING OF THE PUBLICATION SHOULD BE MADE ON THE APPROPRIATE INDEX.

Beechcraft SERVICE BULLETIN

Published by the Customer Service Division

No. 67-9

SUBJECT: INSPECTING THE HEATER-MUFFLER ON BEECHCRAFT MODEL 35-C33A DEBONAIRS AND V35 BONANZAS.

AIRCRAFT AFFECTED: BEECHCRAFT Model 35-C33A Debonairs, Serials CE-1 through CE-149; Model V35 and V35TC Bonanzas, Serials D-7977 through D-8428.

REASON FOR INSPECTION: To determine if there are cracks that would allow exhaust fumes to escape from the system.

ACCOMPLISHMENT: As soon as possible, but not later than the next 25 hours and at every 100 hour inspection thereafter.

DESCRIPTION: On the aircraft described above, inspect the heater-muffler for cracks in the vicinity of the weld seam running lengthwise on the heater-muffler.

1. Open the R.H. engine cowl and the R.H. lower engine access door.
2. Remove both heat ducts from the heater (see figure 1).

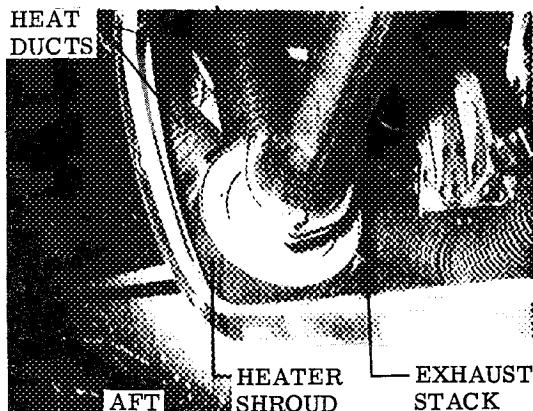


Figure 1

3. Disconnect the heater from the exhaust system, and remove it from the aircraft.
4. Remove the screws from the heater shroud and slide the shroud off the heater.
5. Inspect the heater-muffler visually and pressure test to determine leak tightness in the vicinity of the weld seam as shown in Figure 2. The heater-muffler should be pressurized to approximately 15 PSIG with air

or gas, and either immersed in water or "painted" with a soap solution.

6. If the inspection determines leakage, replace the entire heater assembly with a new heater as noted in the parts required list. If no leakage is apparent reinstall the original heater-muffler.

After complying with this bulletin, enter an appropriate statement in the aircraft log book and return the attached compliance card to Beech Aircraft Corporation.

The following part is required:

PART NUMBER	DESCRIPTION	QUANTITY
701-5	Heater-Muffler Assy. (C33A and V35)	1
8057-29	Heater-Muffler Assy. (V35TC)	1

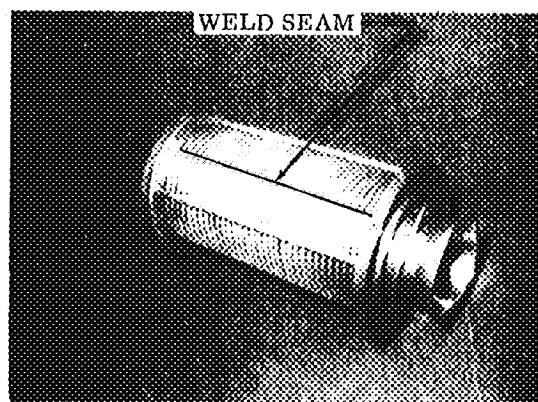


Figure 2

467

THE OPERATION, CARE AND MAINTENANCE OF AN AIRPLANE IS THE OWNERS RESPONSIBILITY. AS CONDITIONS WARRANT, BEECH AIRCRAFT CORPORATION ISSUES SERVICE BULLETINS AND SERVICE LETTERS RECOMMENDING MODIFICATIONS AND OPERATIONAL PROCEDURES TO ENABLE THE OWNER TO GET THE MAXIMUM UTILITY AND SAFETY FROM HIS AIRPLANE.

THESE BULLETINS AND LETTERS ARE AVAILABLE TO BEECHCRAFT OWNERS THROUGH THEIR BEECHCRAFT DISTRIBUTOR OR DEALER. WHEN SERVICE BULLETINS AND LETTERS ARE ISSUED, A TEMPORARY RECORDING OF THE PUBLICATION SHOULD BE MADE ON THE APPROPRIATE INDEX.

No. 0096-412

33,35

SUBJECT: HEATER INSTALLATION, INSPECTING THE HANLON AND WILSON, (P/N 8046-1), HEATER-MUFFLER FOR CRACKS

AIRCRAFT AFFECTED: BEECHCRAFT Bonanzas, Model 35-C33A, serials prior to CE-150; Model V35, serials D-7977 through D-8428; Model V35TC, Turbocharged Bonanzas prior to D-8481 and all other aircraft which have incorporated the Hanlon and Wilson P/N 8046-1, heater-muffler as a replacement part.

REASON FOR CHANGE: To determine if there are cracks that would allow exhaust fumes to escape from the system.

ACCOMPLISHMENT: As soon as is practical after receiving these service instructions and at each 100 hour inspection thereafter.

DESCRIPTION: On BEECHCRAFT Bonanzas, models and serials noted above, it may be possible for cracks to develop in the corrugated roll of the center heat transfer tube. To insure against cracks which would allow exhaust fumes to escape into the heat and vent system, an inspection should be conducted as follows:

1. Open the RH engine cowl and the RH lower engine access door.
2. Remove both heat ducts from the heater (see figure 1).
3. Disconnect the heater from the exhaust system, and remove it from the aircraft.
4. Remove the screws from the heater shroud and slide the shroud off the heater.
5. Inspect the heater-muffler visually to determine leak tightness of the center heat transfer tube. The area to be

inspected is shown in figure 2.

6. If the inspection reveals cracks in this area, replace the entire heater assembly with a new heater as noted in the parts list below. If no cracks are apparent, reinstall the original heater-muffler.

After complying with these service instructions, enter an appropriate statement in the aircraft log book and return the attached compliance card to Beech Aircraft Corporation.

The following replacement parts are available for this modification.

PART NUMBER	DESCRIPTION	QUANTITY
701-5	Heater-Muffler for Model 35-C33A, V35	1
8057-29	Heater-Muffler for Model V35TC	1

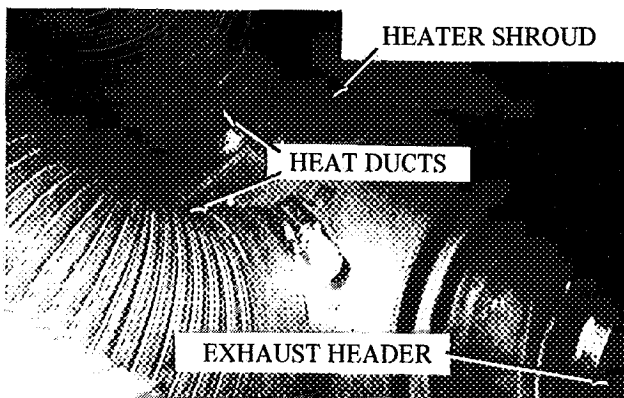


FIG. 1 HEATER-MUFFLER INSTALLATION

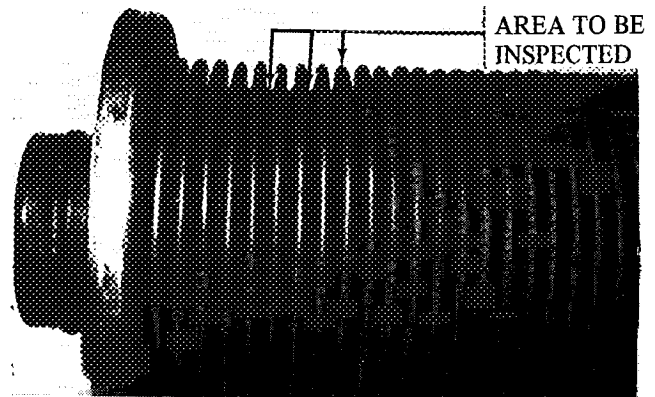


FIG. 2 CENTER HEAT TRANSFER TUBE

Beechcraft SERVICE INSTRUCTIONS

CLASS I

35

No. 0429-412
ATA Code 21-40

SUBJECT: HEATER INSTALLATION, INSPECTION OF HEATER MUFFLER ASSEMBLY.

AIRCRAFT AFFECTED: BEECHCRAFT Bonanzas V35TC, V35A-TC, and V35B-TC, serials D-8036 through D-9180.

REASON FOR CHANGE: To preclude fragments of the heater muffler assembly silencer cone entering the turbocharger system, and to guard against escape of exhaust fumes from the heater muffler assembly core.

ACCOMPLISHMENT: As soon as practical after receipt of these Service Instructions, and at each 100-hour inspection and each engine change thereafter.

DESCRIPTION: On BEECHCRAFT turbocharged Bonanzas it is recommended that the heater muffler assembly be inspected for condition, particularly the core assembly silencer cone. If fragments should separate from the silencer cone due to erosion, particles could be carried into the turbocharger impeller. A new type heater muffler assembly which does not contain a silencer cone is available for replacement (if necessary). Inspection and replacement of the heater muffler assembly is described in the following procedure.

1. Raise the right hand engine cowl door.
2. Remove the access plate on the right hand side of the lower cowl.
3. Disconnect the heater muffler assembly from the heater ducts and the exhaust system, and remove the heater muffler assembly from the airplane.
4. Remove the shroud assembly from the core assembly.
5. Visually examine the perforated silencer cone within the core assembly. Evidence of erosion which could result in separation of particles is cause for replacement of the heater muffler assembly.
6. Inspect the core assembly visually for leak tightness, then pressurize to 25 psig with air or gas, and either immerse in water or "paint" with a soap solution. No leakage is permitted.
7. Reinstallation of the heater muffler assembly or

replacement with a new assembly may be accomplished by reversing the removal procedure.

If required for replacement, the following part is available through the Beech Aircraft Corporation Dealer Organization.

PART NUMBER	DESCRIPTION	QUANTITY
8057-39	Heater Muffler Assembly	1

After each compliance with these Service Instructions, enter an appropriate statement in the aircraft log book. A completed compliance card should be returned to Beech Aircraft Corporation after initial compliance. It is suggested that a note be placed in the parts catalog until the new part number has been incorporated into a revision to the parts catalog.

PLANNING INFORMATION

The following information is for planning purposes only:

Estimated man-hours: 2 hours.
Suggested number of men: 1 man.
Suggested selling price of part: To be advised.

COMPLIANCE CARD RETURN REQUIRED

No BECP

271